



IP 300 Internet Phone [VoIP]



User Manual



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1 BEFORE GETTING STARTED

Product Description

IP is abbreviation of Internet Protocol. An IP phone is a telephone transporting voice by grouping data package of IP protocol. IP phone can be used on IP Networks from an enterprise-wide LAN to a city-wide WAN.

An IP phone transports voice message over data communication network at extremely low price but of excellent sound quality just like ordinary fixed telephone lines do. With our IP 300 Internet phone, you're going to save dramatically on international calls.

With its unique generalized outline and inner line modes. IP300 Internet phone functions much like an ordinary telephone switching between inner line and out line, it brings great convenience to the users. When IP 300 Internet phone is in generalized inner line mode, it is free of charge to call another IP300 phone wherever the destination phone is in the world. When IP 300 series IP net phone is in generalized out line mode, it can place calls to every ordinary telephones in the world at an extremely low price.

With its stability, sound quality, compatibility and rich functionalities, IP300 leverages your wealth with high quality communications!

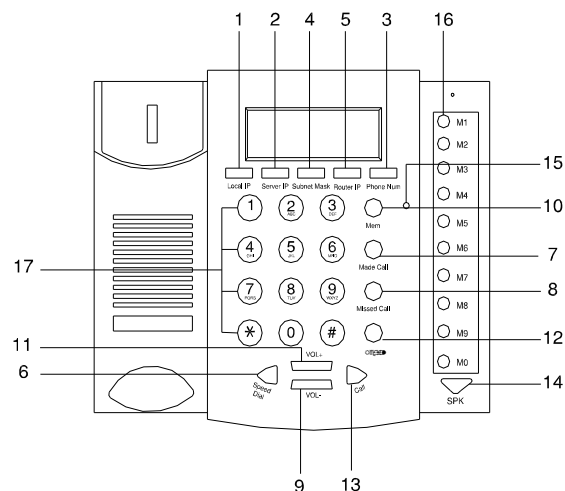
IP 300 IP phone Appearance Introduction:

IP 300 IP Phone Front Illustration

Keypad

1. Local IP address
2. Server IP address (or Service IP)
3. Phone number
4. Subnet mask
5. Router IP (or Gateway IP address)
6. Quick dial-up
7. Made call (reviewing dialed numbers)
8. Missed call (reviewing missed numbers)
9. Volume -
10. Mem key
11. Volume +
12. Redialing
13. Calling
14. Hand free (SPK)
15. LED

16. Saver (Key to save numbers)
17. Number key



Function Keys of IP 300 IP Phone Introduction (Normal State):

| Keys | Function |
|---------------------|---|
| Local IP | With handset hung, press this key to get local IP address of the phone |
| Missed Call | With handset hung, press this key to review missed number |
| Subnet Mask | The subnet mask of the IP phone |
| Router IP | The gateway IP address |
| Speed Dial | Speed dial |
| Phone Number | With handset hung, press this key to get phone number |
| Made Call | With handset hung, press this key to review dialed number |
| Mem | Save speed dial number |
| Server IP | The gatekeeper's IP |
| Redial | While reviewing, press this key to dial missed, received or dialed number |
| SPK | Press this key to have a call without lifting the handset |
| Vol+ | Increase the volumes of handset or speaker; turn over the record backward |
| Vol- | Decrease the volumes of handset or speaker; turn over the record forward |

Features**Hardware**

- Main chip—50MHz
- Data Memory—16MB SDRAM
- Program Memory—8 MB Flash memory
- Ethernet Jack—1/2 10/100M jacks
- AC/DC adapter—Input AC 220V , Output 7.5V DC, 0.8A

Software

- DHCP support for LAN or Cable modem
- PPPoE support for ADSL or Cable modem
- Set phone by HTTP web browser (IE6.0) or Telnet
- Upgrade by FTP
- Support major G.7XX and gsm610 audio codec
- Dynamic voice test
- CNG (Comfort noise generation)
- Dynamic voice jitter buffer
- G.168/165 compliant 16ms echo cancellation
- Tone generation and Local DTMF re-generation according with ITU-T

- E.164 dial plan and customized dial rules
- 100 entries for quick dial
- 80 entries each for missed calls, answered calls and dialed calls
- Adjustable volume for both handset and speaker
- Voice prompt

Standard and Protocol

IP 300 IP Phone supports following standard and protocol:

- IEEE 802.3 /802.3 u 10 Base T / 100Base TX
- Major G.7XX audio codec
- H.323 V4
- MGCP RFC2705
- SIP RFC3261
- Net2phone private protocol
- TCP/IP: Internet transfer and control protocol
- RTP: Real-time Transport Protocol
- RTCP : Real-time Control Protocol
- VAD/CNG save bandwidth
- DHCP : Dynamic Host Configuration Protocol
- PPPoE : Point to Point Protocol over Ethernet
- DNS : Domain Name Server
- Telnet : Internet's remote login protocol
- FTP : File Transfer protocol
- HTTP : Hyper Text Transfer protocol
- Build in H.323 proxy

Operating requirements:

- Operation temperature: 0 to 50° C
- Storage temperature: -10° to 60° C
- Humidity: 10 to 90% no dew

Electric requirements:

- Voltage: 7.5V DC

- Power: 5 W (max.)
- Power adapter: AC/DC input 230V , output 7.5V 0.8A
- Network interface:2X RJ-45 Ethernet Connectors

Size :

198 x 176 x 60 mm (L x W x H)

2 INSTALLING THE IP PHONE

Before installing your IP Phone, it is useful to know what kind of IP addressing your LAN or router is using.

A. What is the IP Addressing of your network?

Most networks, including the Internet, use identification codes called **IP** (Internet Protocol) **addresses** to identify and locate the devices that share their services.

There are two systems for assigning these addresses:

- **DHCP Addressing:** With this system, your LAN or router automatically assigns all the required IP parameters to any device connected to it when the device logs on. (Some ISPs who use DHCP require a **host name**, which must be entered manually.)



Note: Your IP Phone is shipped from the factory with DHCP on, or enabled. So, if your LAN or router is configured to use DHCP addressing, your IP Phone's LAN parameters will automatically be configured as soon as it is connected to the LAN or router and powered up.

- **Static Addressing:** If your LAN does not use DHCP addressing, each device concurrently connected to it must be assigned its own unique IP address. In this case, your LAN's configuration information must be manually entered into the IP Phone. You will need to know the following parameters:
 - IP address
 - Subnet mask
 - Gateway address
 - Primary DNS address
 - Secondary DNS address (required by some systems)



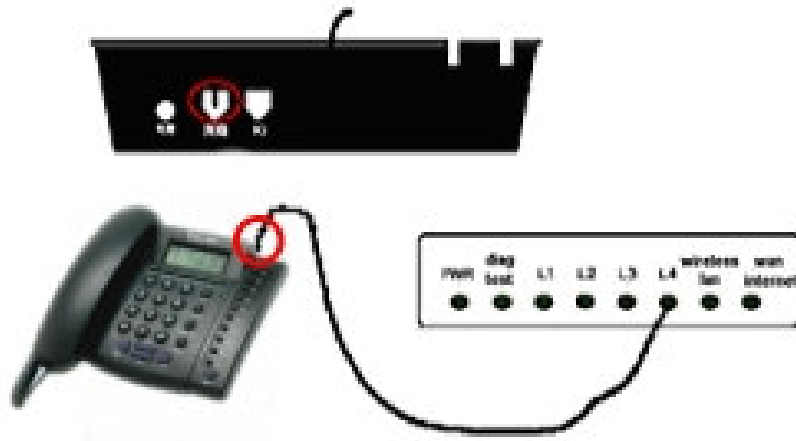
Note: If your system uses static addressing, this is a good time to make sure you know these parameters, since you will need them to configure your IP Phone. If you don't know them, contact your network administrator to obtain the necessary information.

B. Connecting the Handset and Cables

Connect the LAN and power cables to the IP Phone as follows:

1. Connect handset to base: insert handset cord into handset cord jack at the left side of the base.
2. Connect IP phone to Internet: plug the RJ-45 Ethernet cable into the Ethernet

Jack. Plug the other end of the cable into an appropriate LAN or DSL/Cable router port or a HUB.



3. Power on IP phone: plug the power cord adapter into the Power Jack. Then plug the other end of the power cord adapter into the appropriate wall outlet.

If your LAN or router is using DHCP, after finishing the above 3 steps, the LCD should display a series of messages ending with: “Ready for Call” within a few seconds.

Note: If you are not sure whether DHCP service should be present, try the following:

- *Check with your network administrator to find out if the system uses DHCP, or*
- *If your IP Phone is connecting with a router, check to see whether it is configured to provide DHCP addressing.*

If your LAN uses static addressing, “Waiting Logon” will display until you enter the IP Phone’s network settings. Step-by-step instructions for configuring your IP Phone are provided in Section 3: Configuring the IP Phone of this manual.

3 CONFIGURING THE IP PHONE


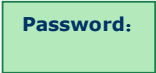


This chapter shows you how to configure the IP phone by keypad, web browser and telnet. It also tells you the meanings of the items you might encounter in the setting process.

A. Using the Keypad to Configure the IP phone

- **Function Keys Introduction:** While using keypad and LCD to configure the setting of IP phone, following keys will be used:

| Keys | Function | Keys | Function |
|-----------------|-------------------------|----------------------|---|
| Local IP | Enter change mode | SPK (Speaker) | Enter submenu; confirm change |
| Vol+ | Turn over menu backward | Vol- | Turn over menu forward; move cursor back in change mode |
| Keypads | Modify values | Redial | Exit current menu; exit change mode |

Enter setting mode:

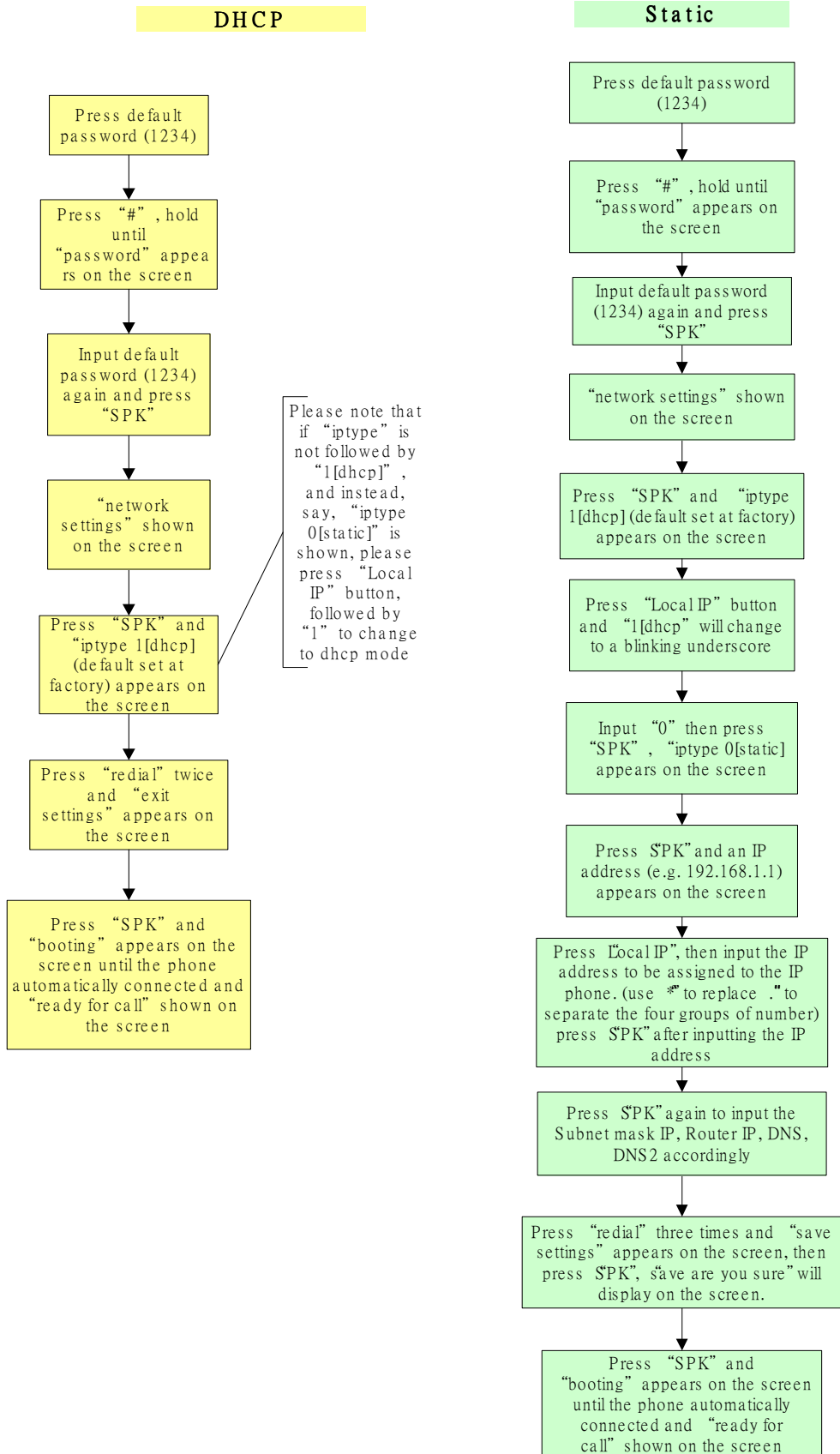
Without picking up the handset, enter the password of the IP phone by pressing the number buttons (default password is 1234), and then press  , hold the button until  appears. Then enter the password again and press  , the IP phone will enter the setting mode with  shown on the screen.

Configure the Network Settings

What if your network is using DHCP Addressing?

The IP Phone is set at the factory for DHCP IP addressing. If your LAN or router uses DHCP addressing, follow the DHCP procedure in the flow chart below. If you are using Static IP addresses, follow the Static IP Address Procedure.

(As the IP Phone is preset as DHCP mode, if you use DHCP addressing, no changes is needed)

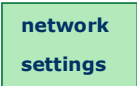


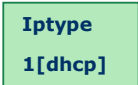
What if your network is using Static IP Addressing ?

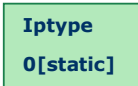
When your LAN settings are using static IP addressing, you should

1. Changing DHCP to static in the IP Phone

Before you assign a static IP address, the IP Phone's DHCP mode must be changed.

1. In the setting mode , press the **SPK** button to access the **IPtype**

screen. 

2. Press **Local IP** button, followed by “0” to change the DHCP setting to static and then press “**SPK**” to confirm. You will see: 

3. Press **SPK** button again to enter the LAN parameters.

You must now enter your LAN parameters individually as follows:

2. Entering Your LAN Parameters

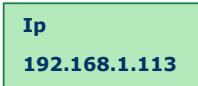
If you have changed the IP type in your IP Phone and you know your LAN parameters, you are ready to begin entering the information.

The parameters you will enter are:

- An IP address
- A subnet mask
- A gateway address
- A primary DNS address
- A secondary DNS address

a. Enter the Local IP address

1. When  appears, press **SPK** followed by **Local IP** button to input the IP address.



2. Use the dialpad to enter the IP address. For example: 192.168.1.113 

(Please press “*” button to input “.” separating the 4 groups of numbers.



In this case, press: 192*168*1*113 on the dialpad)

3. Press **SPK** to confirm and input the next parameter

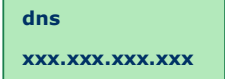

b. Enter the subnetmask address

1. When  appears, press **“SPK”** then **“Local IP”** button to input the subnetmask address.
2. Use the dialpad to enter the subnetmask address. For example:
255.255.255.0 
(Please press **“*”** button to input **“.”** separating the 4 groups of numbers.)
3. Press **SPK** to confirm and input the next parameter

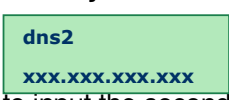
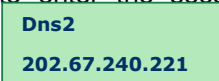
c. Enter the gateway (router) address

1. When  appears, press **SPK** followed by **Local IP** button to input the router (gateway) address.
2. Use the dialpad to enter the gateway address. For example:
192.168.1.254 
3. Press **SPK** to confirm and input the next parameter

d. Enter the dns address

1. When  appears, press **SPK** followed by **Local IP** button to input the dns address.
2. Use the dialpad to enter the dns address. For example: 202.67.240.222

3. Press **SPK** to confirm and input the next parameter

e. Enter the secondary dns address

1. When  appears, press **SPK** followed by **Local IP** button to input the secondary dns address.
2. Use the dialpad to enter the secondary dns address. For example:
202.67.240.221 
3. Press **SPK** to confirm.

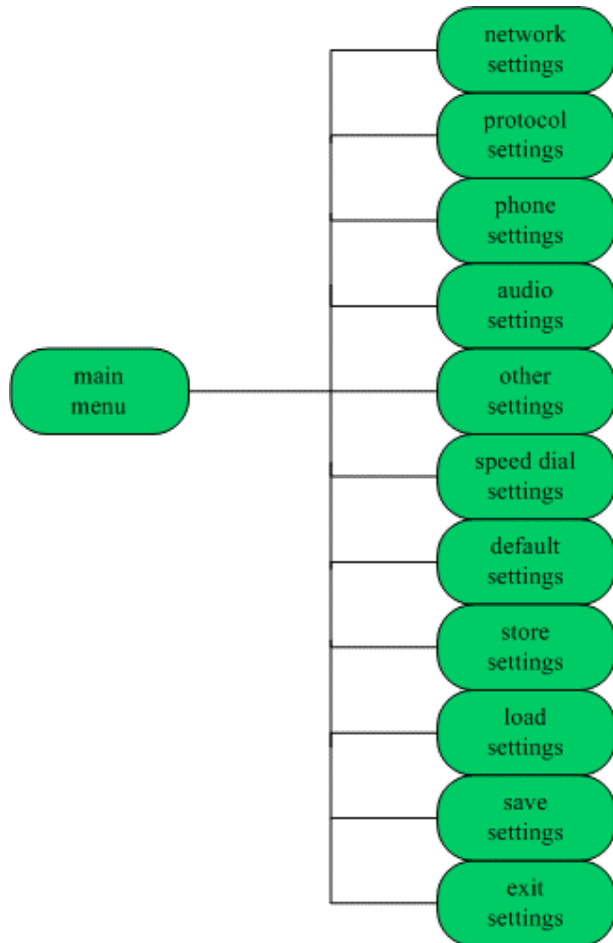
Now you've finished inputting the LAN parameters, please press **“Redial”** return to **“network settings”** screen, press **“Redial”** again to access **“save settings”** screen. Press **“SPK”** and it will show **“save Are you sure”**. Press **“SPK”** again to reboot the IP phone. After booting, the screen will be like that:

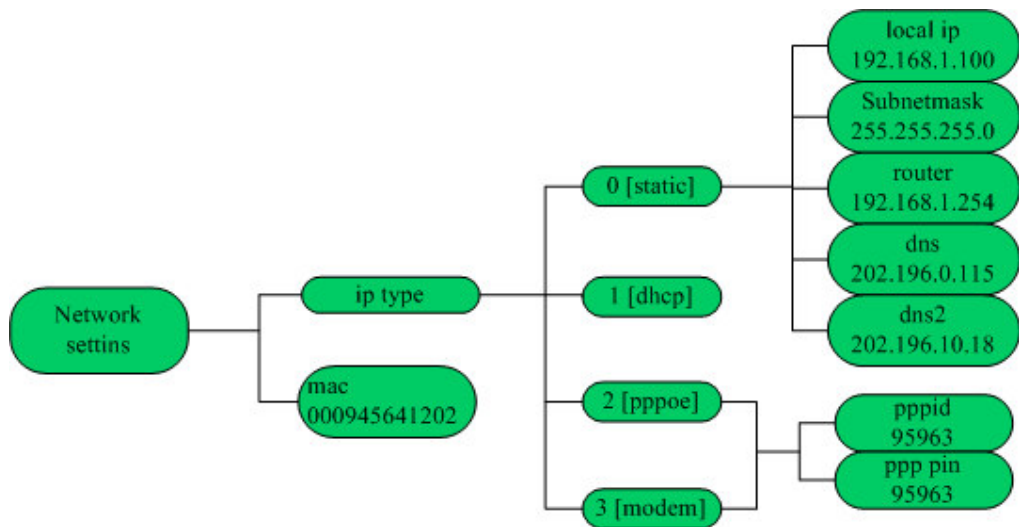


Ready for call
IP-300

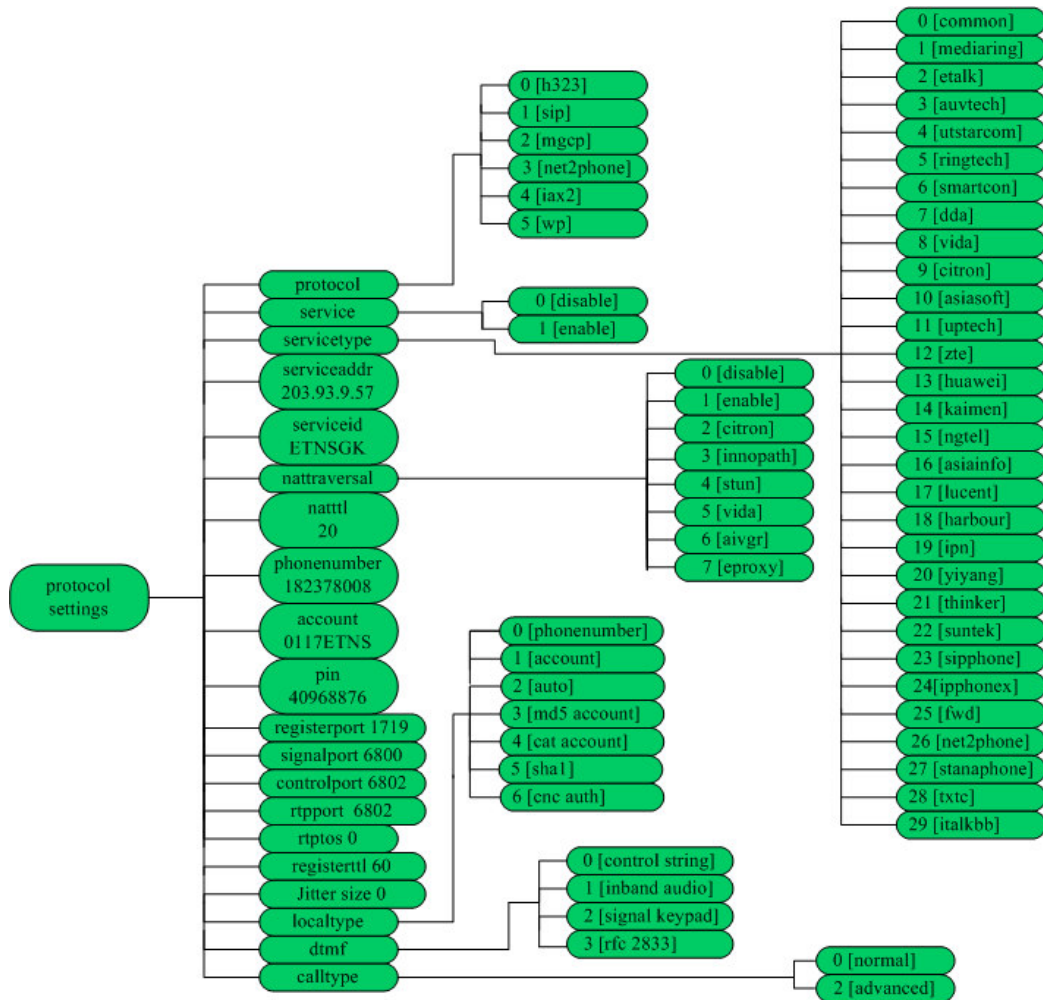
Refer to above operation; you can reach any menu to modify any value. Please refer to following structure illustrations to learn the values of each menu item. As for the meaning of each item and value, please refer to **Web Browser Setting** chapter.

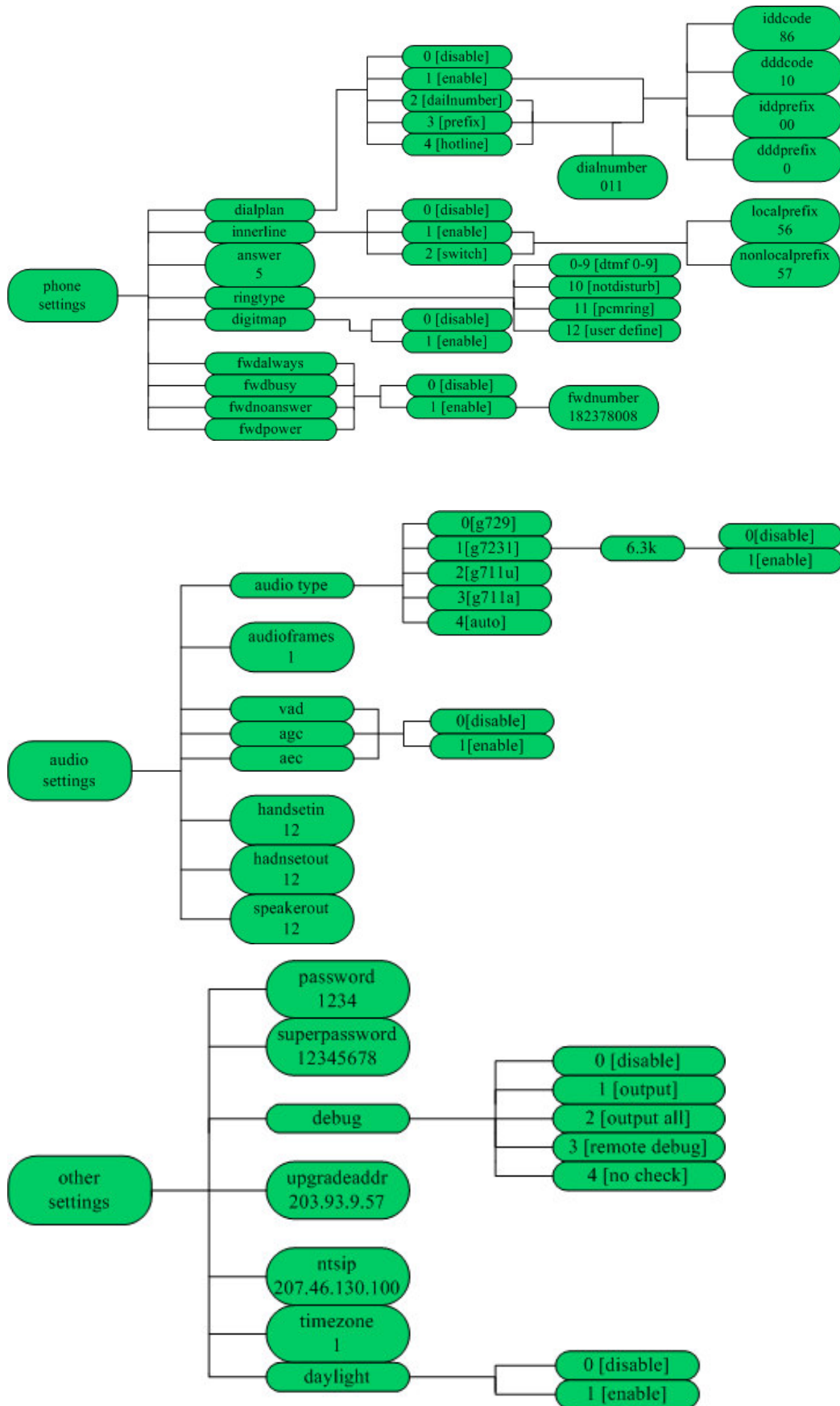
Menu Structure:





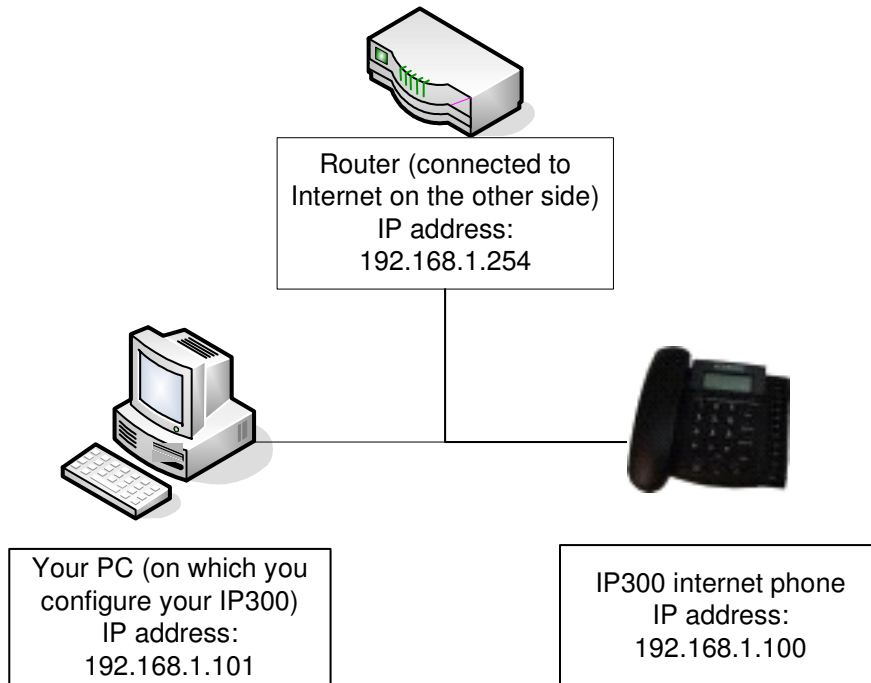
?






B. Using the Web Browser to configure the IP phone

The following diagram imitates a simple network layout in which the PC and IP300 connect to the internet through a router.



On a PC connecting with the phone or at the same segment of the phone as the above diagram shows (make sure that your PC and the IP phone are on the same network and are assigned an IP address), double click  icon to open the IE browser. Input the IP address of the phone into address bar (Address), and then input password of the phone into the following page. Default password 1234 is ordinary password. Then click button. The following configured page (on page 13) will popup. Input the data by your computer's keyboard according to your LAN parameters under the "network settings" , "protocol settings" , "phone settings" and "audio settings". When finished, click "update" and quit the screen.

| network settings | | | | | |
|--|-------------------------------------|----------------|-------------------------------------|-------------------|-------------------------------------|
| ip type | dhcp | ppp id | | ppp pin | |
| local ip | 192.168.3.103 | subnet mask | 255.255.255.0 | router ip | 192.168.3.1 |
| dns | 202.96.134.133 | dns2 | 202.96.128.68 | mac | 00-09-41-63-05-04 |
| protocol settings | | | | | |
| protocol | h323 | use service | <input checked="" type="checkbox"/> | register ttl | 60 |
| service type | common | service addr | 218.189.135.2 | service id | |
| nat traversal | citron | nat addr | | nat ttl | 60 |
| phone number | 6022 | account | hk016 | pin | |
| register port | 1719 | signal port | 3102 | control port | 3022 |
| jitter size | 0 | rtp tos | 0 | rtp port | 3208 |
| local type | phonenumber | call type | normal | dtmf | control string |
| phone settings | | | | | |
| use dialplan | disable | dial number | | ddcode | 10 |
| iddcode | 86 | iddprefix | 00 | dddprefix | 0 |
| innerline | disable | local prefix | 0 | nonlocal prefix | 0 |
| answer | 30 | ring type | user define | use digitmap | <input type="checkbox"/> |
| forward number | 82378801 | fwd poweroff | <input type="checkbox"/> | fwd noanswer | <input type="checkbox"/> |
| fwd always | <input type="checkbox"/> | fwd busy | <input type="checkbox"/> | call waiting | <input type="checkbox"/> |
| audio settings | | | | | |
| audio type | g7231 | audio frames | 1 | g.723.1 high rate | <input checked="" type="checkbox"/> |
| vad | <input checked="" type="checkbox"/> | age | <input type="checkbox"/> | aec | <input checked="" type="checkbox"/> |
| handset in | 4 | handset out | 27 | speaker out | 31 |
| other settings | | | | | |
| password | 1234 | super password | 19750407 | debug | disable |
| sntp ip | 210.59.157.10 | use daylight | <input type="checkbox"/> | upgrade addr | |
| timezone | (GMT+08:00)Beijing,Hong Kong,Urumqi | | | | |
| Save/Reboot | | | | | |
| Address Book | | | | | |
| Update Firmware, Digitmap and Ring | | | | | |

Fig1 Http Setting Page

Network Setting :

| network settings | | | | | |
|------------------|----------------|-------------|---------------|-----------|-------------------|
| ip type | dhcp | ppp id | | ppp pin | |
| local ip | 192.168.3.103 | subnet mask | 255.255.255.0 | router ip | 192.168.3.1 |
| dns | 202.96.134.133 | dns2 | 202.96.128.68 | mac | 00-09-41-63-05-04 |

Fig 2 Network Setting Page

- **ip type:** Set phone gets relevant network parameters by selecting corresponding item from drop down list.

- **static ip**: Select this item to authorize users set IP address, subnet mask and router IP address of IP phone manually.
- **dhcp**: Select this item to enable DHCP mode. With this system, your LAN or router automatically assigns all the required network parameters to any device connected to it when the device log on. IP 300 IP phone is shipped from the factory with DHCP on. So, if your LAN or router is configured to use DHCP addressing, the IP phone's LAN parameters will automatically configure as soon as it is connected to the LAN or router and powered up.
- **pppoe** : The users using ADSL and Cable Modem may select this item, for it is a protocol especially designed for them. With this system, ADSL ISP automatically assigns all the required IP parameters to any device connected to it when the device log on.
- **modem** : If the IP phone used with modem, please select this item to get relevant network parameters auto. Then please fill ID and pin into ppp id and ppp pin fields.
- **ppp id**: With **pppoe** or **modem** selected in **iptype** drop down list, please enter the user name here.
- **ppp pin**: With **pppoe** or **modem** selected in **iptype** drop down list, please enter the password here.
- **local ip**: With **static ip** selected in **iptype** drop down list, please enter IP address of IP phone here.
- **subnet mask**: With **static ip** selected in **iptype** drop down list, please enter subnet mask of IP phone here.
- **router ip**: With **static ip** selected in **iptype** drop down list, please enter router

IP address of IP phone here.


- **dns:** With **static ip** selected in **ip type** drop down list, please enter IP address of DNS server here.
- **dns 2:** With **static ip** selected in **ip type** drop down list, please enter IP address of backup DNS server here.
- **mac:** MAC address is the physical address supplied by the Ethernet NIC. IP 300 phone is shipped from the factory with a unique algorithm MAC address printed on the back of the base.

protocol settings :

| protocol settings | | | | | |
|-------------------|--|--------------|--|--------------|---|
| protocol | <input type="text" value="h323"/> | use service | <input checked="" type="checkbox"/> | register ttl | <input type="text" value="60"/> |
| service type | <input type="text" value="common"/> | service addr | <input type="text" value="218.189.135.2"/> | service id | <input type="text"/> |
| nat traversal | <input type="text" value="citron"/> | nat addr | <input type="text"/> | nat ttl | <input type="text" value="60"/> |
| phone number | <input type="text" value="6022"/> | account | <input type="text" value="hk016"/> | pin | <input type="text"/> |
| register port | <input type="text" value="1719"/> | signal port | <input type="text" value="3102"/> | control port | <input type="text" value="3022"/> |
| jitter size | <input type="text" value="0"/> | rtp tos | <input type="text" value="0"/> | rtp port | <input type="text" value="3208"/> |
| local type | <input type="text" value="phonenumber"/> | call type | <input type="text" value="normal"/> | dtmf | <input type="text" value="control string"/> |

Fig 3 Protocol Setting Page

- **protocol:** Select the protocol used from the list box.
 - **h323:** Select this item to use H.323 protocol.
 - **sip:** Select this item to use SIP protocol.
 - **mgcp:** Select this item to use MGCP protocol.
 - **n2p:** Select this item to use Net2phone private protocol.
 - **IAX2:** Select this item to IAX2 private protocol .
 - **WP:** Select this item to WP Private protocol.

 **Note** With Net2phone selected here, please set other necessary parameters: check **use service** option, and then fill IP address or domain name of designated server into **service addr** field; then set **service port** as **6801**; fill account and password of Net2phone card into **account** and **pin** fields.

- **use service:** Enable/disable service by checking/clearing this box.
 - With H.323 protocol selected, service refers to the gatekeeper. To make calls through gatekeeper, please check this box; otherwise, phone can only make IP-to IP calls or calls through gateway.
 - With MGCP protocol selected, service refers to Call Agent. Always check this box since there is no way to make calls without a Call Agent.
 - With SIP protocol selected, service refers to SIP Proxy Server. To make calls through gatekeeper, please check this box; otherwise, phone can only make IP-to IP calls.
 - With Net2phone protocol selected, service refers to Net2phone designated server. Always check this box to use Net2phone's service.
-

 **Note** Designated Net2phone server IP address are: 216.53.3.52; 4.43.114.39; 4.43.114.38 or 05.228.245.8. Domain names are: call1.net2phone.com; call2.net2phone.com; skip1.net2phone.com; skip2.net2phone.com; skip1.f8g9h0.net or skip2.f8g9h0.net.

- **service type:** This option is used to accommodate the miscellaneous requirements of the system providers. When IP phone is connected to these systems, please select the corresponding service type.
- **register ttl :** With H323 or SIP protocol, IP phone will send a keep-alive registration message to H323 gatekeeper or SIP proxy server every "**register ttl**" seconds. The minimum value is 10, maximum value is 255. Default is 60.
- **Common:** no special requirements
 - ◆ **Mediating:** use Mediating prepaid card
 - ◆ **Etalk:** use etalk prepaid card. When this is selected, please select

“dialnum” from the **“Use dialplan”** list box and put **“00”** into **“dial number”**.

- ◆ **Auvtech:** use Auvtech’s H.323 system. When connected with Auvtech’s system, please select **“auvtech”** from the **“nat traversal”** list box, select **“account”** from the **“local type”** list box.
- ◆ **Utstarcom:** Use Utstarcom system
- ◆ **Ringtec:** Use Ringtec’s H.323 system. When this is selected, please select **“dialnum”** from the **“Use dialplan”** list box and put Ringtec account into **“dial number”**.
- ◆ **Smartcon:** Use Smartcon’s H.323 system
- ◆ **Dda:** Use Dda’s H.323 system
- ◆ **Vida:** Use Vida’s H.323 system
- ◆ **Citron:** Use Citron’s H.323 system
- ◆ **Asiasoft:** Use Asiasoft’s H.323 system
- ◆ **Uptech:** Use Uptech’s MGCP system
- ◆ **Zte:** Use Zte’s MGCP system
- ◆ **Huawei:** Use Huawei’s MGCP or H.323 system
- ◆ **Kaimen:** Use Kaimen’s MGCP system
- ◆ **Ngitel:** use Ngitel system
- ◆ **Voipack:** Use Voipack’s MGCP system
- ◆ **Asiainfo:** Use Asiainfo’s H.323 system
- ◆ **Lucent:** Use Lucent’s H.323 system
- ◆ **Harbor:** Use Harbor’s MGCP system
- ◆ **IPN:** Use IPN’s H.323 system
- ◆ **Yiyang:** Use Yiyang’s H.323 system

- ◆ **Thinker:** Use Thinker's H.323 system
 - ◆ **Suntek:** Use Suntek's H.323 system
 - ◆ **Sipphone:** Free SIP service on internet, please visit www.sipphone.com for more information.
 - ◆ **Inphonex:** Free SIP service on internet, please visit www.inphonex.com for more information.
 - ◆ **Fwd:** Free SIP service on internet, please visit www.freeworldialup.com for more information.
 - ◆ **Net2phone:** Use Net2phone private protocol system.
 - ◆ **Stanaphone:** Use stanaphone system.
 - ◆ **Txtc :** Use txtc system.
 - ◆ **Italkbb:** use italkbb system.
- **service addr, service id:** Please put the URI (domain name/IP address : service port) of the server into "**service addr**". When the default service port is used, ":" service port" can be omitted. "**service id**" is filled according to the protocol used.
 - H.323: If "**use service**" is checked, please put the URI of gatekeeper into "**service addr**". The default service port is 1719. If the gatekeeper has a GKID, please put it into "**service id**".

If "**use service**" is not checked, to make calls through gateway, please put the URI of the gateway into "**service addr**". To make IP-to-IP call, please clear this field. In both cases, the default service port is 1720.
 - MGCP: Please put the URI of Call Agent into "**service addr**". The default service port is 2727. Leave "**service id**" empty.
 - SIP: If "**use service**" is checked, please put the URI of the SIP proxy server into "**service addr**". Put the domain name of the SIP proxy server into "**service id**" or leave "**service id**" empty. If the system has an Outbound Proxy , please put the URI of the Outbound proxy into "**service addr**" and put the domain name of SIP proxy server into "**service id**". The default service port is 5060. If "**use service**" is not checked, please clear "**service addr**" and

“**service id**”.

- **Net2phone:** Please put the URI of the Net2phone server into “**service addr**”.
The default service port is 6801. Leave “**service id**” empty. Net2phone usually use the following servers: call1.net2phone.com; call2.net2phone.com; skip1.net2phone.com; skip2.net2phone.com; skip1.net2phone.net; skip2.net2phone.net.
- **nat traversal:** When the IP phone with private IP address need communicate with other IP phones in a different LAN or on Internet, please select an item from dropdown list to set the proxy used by the phone.
 - **disable:** Select this item when the log in server and IP phone in the same LAN, or the log in system supports the IP phone working behind the LAN.
 - **enable:** When the system does not support IP phone working behind the LAN, please select this item to search public IP address of the NAT device. With this item selected, “**nat addr**” field will be activated. Besides, port mapping (port forwarding) needs to be properly set up on NAT device.
 - **citron:** With Citron private protocol used, select this item to fit into the GnuGK system transferring the voice and signal by router.
 - **Innopath:** Select this item with Innopath private system used.
 - **stun:** Select this item with SIP protocol used according to requirement of system. With this item selected, **nat addr** field is activated.
 - **vida:** Select this item with Vida private system used.
 - **aivgr:** Select this item with aivgr private system used.
 - **Eproxy:** Select this item with eproxy system used.
- **nat addr:** When “**nat traversal**” is set to “**enable**”, please put the domain name of the servers (These web server helps to find out the public IP of the IP phone) into “**nat addr**”, such as www.whatismyip.com.

When “**nat traversal**” is set to “**stun**”, please put the URI of the stun server into “**nat addr**”, in the format as “domain name/IP address : service port”. The default service port for stun is 3478.

- **nat ttl:** When IP phone sit behind a NAT device, it will send packets to server

every “**nat ttl**” seconds to keep the port mapping on the NAT device alive. “**nat ttl**” is an integer between 10 and 60, default value is 20.

- **phone number:** The local phone number or username of this phone, usually is allocated by system.
- **account:** With H323 protocol used, while calling card is set, please type the account of chosen card into this field; while **md5 account** item selected in **local type** dropdown list, enter ID here; while **account** is selected in **local type** dropdown list, enter H323 ID here. While **prefix** item selected in **use dialplan** dropdown list, enter language indicating number, card number and # here, such as 14589653185 # . With SIP system which requires authentication, please put the username/account into this field. With MGCP protocol used, please enter local endpoint id (eg., aaln/0) here. With Net2phone system used, enter account of Net2phone card here.
- **pin:** With H323 protocol used, while calling card is set, please type the password of chosen card into this field; while **md5 account** item selected in **local type** dropdown list, enter password here. While **prefix** item selected in **use dialplan** dropdown list, enter password and # here, such as 3185 # . With SIP system which requires authentication, please put the password into this field. With MGCP protocol used, please enter domain name here. With Net2phone system used, enter password of Net2phone card here.



Note When MGCP protocol is used, some system requires adding “[]” outside the domain name. So please fill the domain name with “[]” into pin fields, such as [voiptest.com] .

- **register port:** The local UDP port registered with server to accept incoming handshaking messages. The default port number for MGCP protocol is 2427. The default port number for SIP protocol is 5060. For H.323 or Net2phone, any number between 1024 and 65535 is acceptable.
- **signal port:** With H323 protocol used, signal port is Q.931 port using TCP protocol, can be any number between 1024 and 65535.
- **control port:** With H323 protocol used, this port is H.245 port using TCP protocol, can be any number between 1024 and 65535.
- **Jitter size:** Setting RTP data stream anti-buffer size. The specific value ranges 0-32. The unit is Tone Frame number. (The value is bigger, the tone frame

number is much more in the buffer area and the time-lapse is longer all ordingly.)

- **Rtp tos:** Set the TOS field of the IP header of the RTP packets. The bigger this value is, the higher priority the packet is.
- **rtp port:** RTP port is the port transferring and receiving voice packets using UDP protocol. This is an even number between 1024 and 65535, can't be the same as "register port".
- **local type:** With H323 protocol used, this parameter refers to how IP phone authenticate itself to the gatekeeper. The meaning of each item is as follow:
 - **phone number:** Use phone number as E.164 and H323 ID to login the GK.
 - **account:** Use phone number as E.164 and designated H323 ID filled in account field as H323 ID to login GK.
 - **auto:** And H235 encrypted username and password match to used. The automatic negotiation use MD5 or CAT encrypted.
 - **md5 account:** with H323 protocol used, according to the log in gatekeeper ,enable/disable H235 encryption by selecting /deselecting this item . With this item selected, please fill the user name and password into **account** and **pin** fields respectively.
 - **cat account:** Select this item to use cat(Cisco Access Talk) authentication. With this item selected, please fill the user name and password into **account** and **pin** fields respectively.
 - **Sha1 :** Select this item to use **sha1**(Secure Hash Algorithm V1) encrypted .
 - **cnc auth :** Select this item to use **cnc auth** system.
- **call type:** Set call type by selecting the items in drop down list.

- **normal:** Call out in normal way by selecting this item.
- **faststart:** Call out in faststart way by selecting this item.
- **advanced:** Call out in faststart and tunneling way by selecting this item. It is a recommended way with H323 protocol used.

dtmf: Set DTMF signal sending way by selecting **control string**, **inband audio**, **signal keypad** or **rfc 2833** from list box.

phone settings:

| phone settings | | | | | |
|----------------|---------------------------------------|--------------|------------------------------------|-----------------|---------------------------------|
| use dialplan | <input type="text" value="enable"/> | dial number | <input type="text" value=""/> | ddcode | <input type="text" value="10"/> |
| iddcode | <input type="text" value="86"/> | iddprefix | <input type="text" value="00"/> | dddprefix | <input type="text" value="0"/> |
| innerline | <input type="text" value="disable"/> | local prefix | <input type="text" value="22"/> | nonlocal prefix | <input type="text" value="0"/> |
| answer | <input type="text" value="30"/> | ring type | <input type="text" value="dtmf0"/> | use digitmap | <input type="checkbox"/> |
| forward number | <input type="text" value="82378009"/> | fwd poweroff | <input type="checkbox"/> | fwd noanswer | <input type="checkbox"/> |
| fwd always | <input type="checkbox"/> | fwd busy | <input type="checkbox"/> | | |


Fig 3.4 Phone Setting Page

- **Use dialplan:** Set whether use dial plan or use dial number by selecting the corresponding item in drop down list.
 - **disable:** Do not use dial plan or dial number by selecting this item.
 - **enable:** Use dial plan by selecting this item.
 - **dialnum:** Use dial number by selecting this item. With this item selected, please enter the dial prefix into **dial number** field.
 - **prefix:** Use 179XX service by selecting this item.
 - **Hotline:** Use Hotline function by selecting this item. With this item selected, please enter the hotline number into **dial number** field.

 **Note** With 179xx service used, please set as follows: fill call prefix into dial

number field, such as 17930; type; language indicating number, card number and # into account field; fill password and # into pin field.

- **dial number:** With **dialnum** selected in **use dialplan** drop down list, please enter the dial prefix into this field according to requirement of log in server. For example, with eTalk card used, enter 00 here.
 - **ddd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set area code according to E.164 dial rule. For example, Beijing 10; Shanghai 21.
 - **idd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set country code according to E.164 dial rule. For example, China 86; U.S.A .1.
 - **idd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set international call prefix according to E.164 dial rule, such as 00.
 - **ddd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set long distance call prefix according to E.164 dial rule, such as 0.
-

 **Note** With **dialnum** selected in **use dialplan** drop down list, you can also set dddcode, idddcode, idddprefix and dddprefix according to requirement of system.

- **innerline:** Enable/disable multi-settings by selecting corresponding items from dropdown list. IP 300 IP phone allows saving 5 settings totally.
 - **disable:** Disable multi-settings by selecting this item, then the phone will call out using current setting.
 - **enable:** Use designated system to place calls by selecting this item.
 - **Omit prefix:** Select this the item to overlook value of the prefix. With use to specialties system.
-

 **Note** To modify the parameters of backup settings, please use Telnet commands.

- **local prefix:** With **enable** or **switch** selected in **innerline** dropdown list, please fill the number switching to backup setting 1 here, such as 56.
- **nonlocal prefix:** With **enable** or **switch** selected in **innerline** dropdown list, please fill the number switching to backup setting 2 here, such as 57.
- **answer:** Enter a number from 0 through 60 to set the entries of the seconds before the phone answer the call auto or forward the calls. To disable auto answer function, please set this parameter as 0.
- **ring type:** Set ring type by selecting corresponding item from drop down list.
 - **dtmf 0-9:** Set ring as ordinary rings in different frequency
 - **not disturb:** Set the phone do not ring by selecting this item.
 - **pcmring:** Set ring as music shipped from factory by selecting this item.
 - **user define :** Set ring as music saved by user by selecting this item.
- **use digitmap:** Enable/disable digitmap by checking/unchecking the box.
- **answer:** Enter a number from 0 through 60 to set the entries of the seconds before the phone answer the call auto or forward the calls. To disable auto answer function, please set this parameter as 0.
- **fwd number:** Enter receiving forwarded calls phone number into this field; If the IP phone used with modem, with **modem** item selected in **iptype** list box, and then fill ISP number into this field.
- **fwd poweroff:** Forward calls if power off by checking this box. Please enter

receiving forwarded calls phone number into **fwd number** field.

- **fwd always:** Forward all calls by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.
- **fwd busy:** Forward calls if busy by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.
- **fwd noanswer:** Forward calls without replying by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

Audio settings:

| audio settings | | | | | |
|----------------|-------------------------------------|--------------|---------------------------------|-------------------|-------------------------------------|
| audio type | <input type="text" value="auto"/> | audio frames | <input type="text" value="2"/> | g.723.1 high rate | <input checked="" type="checkbox"/> |
| vad | <input checked="" type="checkbox"/> | agc | <input type="checkbox"/> | aec | <input checked="" type="checkbox"/> |
| handset in | <input type="text" value="7"/> | handset out | <input type="text" value="20"/> | speaker out | <input type="text" value="20"/> |

Fig 3.5 Audio Setting Page

- **audio type:** Select the audio compression algorithm from the list box. The options are **g729** , **g7231** , **g711u** , **g711a** and **auto**. “**auto**” is suggested, since when “auto” is selected, IP phone will negotiate with system about which algorithm to use and be able to communicate with more terminals and systems.
- **audio frame:** Set audio frames in RTP package. With G723 audio codec used, set it as 1; with G729 audio codes used, set it as 2.
- **g.723.1 high rate:** With g.723.1 selected in audio type dropdown list, enable/disable g.723.1 high rate by checking/ unchecking this option.
- **vad:** Enable/disable VAD (voice activity detection) by checking/ unchecking this box.
- **agc:** Enable/disable AGC by checking/unchecking this box.
- **aec:** Enable/disable VEC by checking/unchecking this box.
- **handset in:** Drag the slider to adjust the volume of handset input. Drag it to the left to reduce the volume; while drag it to the right to increase the volume.

- **handset out:** Drag the slider to adjust the volume of handset output. Drag it to the left to reduce the volume; while drag it to the right to increase the volume.
- **speaker out:** Drag the slider to adjust the volume of handfree output. Drag it to the left to reduce the volume; while drag it to the right to increase the volume.

Other settings:

| other settings | | | |
|----------------|--|----------------|---------------------------------------|
| password | <input type="text" value="1234"/> | super password | <input type="text" value="12345678"/> |
| debug | <input type="text" value="output"/> | | |
| sntp ip | <input type="text" value="210.59.157.10"/> | use daylight | <input type="checkbox"/> |
| upgrade addr | <input type="text"/> | | |
| timezone | <input type="text" value="(GMT+08:00)Beijing,Hong Kong,Urumqi"/> | | |

Fig 3.6 Other Setting Page

- **password:** Set the password of the phone. (Default password is 1234).
- **debug:** Set the debug level of the phone.
 - **disable:** Disable output the bug message by selecting this item.
 - **output:** Output the operation information to the window, such as register, input by selecting this item.
 - **output all:** Output all bug information and data in test window by selecting this item.
 - **remote debug:** Save the bug information in SDRAM of IP phone by selecting this item.
 - **no check:** Disable checks the mark by selecting this item.
- **upgrade addr:** Enter IP address or domain name obtained by ISP of FTP server supplying updated program here.
- **sntp ip:** Fill IP address of time server here.
- **use daylight:** Enable/disable daylight by checking/unchecking this box.
- **timezone:** Select correct time zone in dropdown list.

When debug set as 0[disable], if input ordinary password (default one is 1234), then following page will pop up after clicking [login](#). And only those parameters can be modified.

| network settings | | | |
|------------------|----------------|-------------|---------------|
| iptype | dhcp | ppp id | |
| local ip | 192.168.3.103 | subnet mask | 255.255.255.0 |
| dns | 202.96.134.133 | dns2 | 202.96.128.68 |
| | | ppp pin | |
| | | router ip | 192.168.3.1 |

| protocol settings | | | |
|-------------------|--------|--------------|--------|
| nat traversal | citron | nat addr | |
| phone number | 6022 | account | hlk016 |
| register port | 1719 | signal port | 3102 |
| | | rtp port | 3208 |
| | | control port | 3022 |

| phone settings | | | |
|----------------|--------------------------|--------------|--------------------------|
| answer | 30 | ring type | user define |
| forward number | 82378801 | fwd always | <input type="checkbox"/> |
| fwd poweroff | <input type="checkbox"/> | fwd busy | <input type="checkbox"/> |
| | | fwd noanswer | <input type="checkbox"/> |

| other settings | |
|----------------|-------------------------------------|
| password | 1234 |
| upgrade addr | |
| snmp ip | 210.59.157.10 |
| use daylight | <input type="checkbox"/> |
| timezone | (GMT+08:00)Beijing,Hong Kong,Urumqi |

[Save/Reboot](#)
[Address Book](#)
[Update Firmware, Digitmap and Ring](#)

Fig 3.7 Setting Page using ordinary pin with Debug set as 0 [disable]

- **Save/Reboot:** Click this button to save the configuration and the phone will reboot. Once the phone reboots successfully, the new configuration is effective.

Note After entering set page, if **Update** button is not clicked within 5 seconds, then when you click it again, the index page asking for pin will pop up again. Then please input the password again to enter the set page and then click **Update** button to confirm the modification.

Address Book: Click this button to open the speed dial settings page. Please refer to Fig 3.7. In this page, you can set and save the speed dial number by typing the name into the **Name** field and then entering the corresponding number following the name. For example, input Jack in Name field following 001, and then input 5989426454 into Phone number field. Then Jack's number 5989426454 is saved in phone book. Then please click **Save/Back** button. In normal state, you can use speed dial to call numbers saved in phone book.

Note With H323 protocol used, if the phone dose not login Gatekeeper or Gateway; or with SIP protocol used, the phone dose not login Server Proxy, you can save IP address of other phone into phone number field.

| Phone Book | | | | | |
|------------|------|--------------|-----|-------|--------------|
| No. | Name | Phone Number | No. | Name | Phone Number |
| 001 | Jack | 5989426454 | 002 | Allen | 192.168.1.56 |
| 003 | | | 004 | | |
| 005 | | | 006 | | |
| 007 | | | 008 | | |
| 009 | | | 010 | | |

Fig 3.8 Phone Book Illustration

Update Firmware, Digitmap and Ring: Click this button to update the program, Digitmap and Ring. See the

Firmware File Name:

Digitmap File Name:

Ring File Name:

Fig 3.9 Update Firmware, Digitmap and Ring Illustration

Upgrade Firmware: Click this button to update the program of IP phone. Before updating, First, please use **Browse** button to select the Bin file corresponding with the IP-300 IP phone. and then click **Update Firmware** button. Then the phone will read the corresponding bin files and then load into the phone.

Update Digitmap: Click this button to update the digitmap of the phone. Before updating, First, please use Browse button to select the Digitmap Txt file, and then click **Update Digitmap** button. Then the phone will read the corresponding map files and then load into the phone.

Update Ring: Click this button to Update the ring of the phone. Before updating, First ,please use **Browse** button to select the ring file, and then click Update Ring button. Then the phone will read the corresponding ring file and then load into the phone.

C. Telnet Configuration

- On the PC connecting with the phone or on the same segment with the phone, choose **Start>Run**, and then type **telnet 192.168.1.100** into **Run** field in popuing Run dialog. Or input **telnet 192.168.1.100** in the DOS window. Then the following information will be displayed.

IP 300 V1.38 settings

Password :

Then please type password. With debug is set as 0[disable], if type ordinary password (default one is 1234), after Retun, you will see :

Password : ****

P:\>

If you type super password, then you will see:

Password : *****

P:\>

Above information indicates that IP phone is under setting mode, Then you can set the IP 300 IP phone by using the telnet commands.

IP 300 Telnet Commands Explanation

IP 300 Telnet Commands

| Command | Function |
|------------|---|
| ? | Supply command name and parameters |
| get | Display basic parameters of the IP 300 IP phone |
| set | Set parameters of the IP 300 IP phone |

| | |
|--------------|---|
| store | Save current settings to designated position |
| load | Load designated settings to current position |
| exit | Exit from the setting mode without saving the configuration |
| write | Exit with saving all configurations and restart IP 300 |
| ping | Ping other net parameter |
| ftp | The phone connects to FTP server and then get the files |

Detail description of IP 300 Telnet commands

Command ?

Syntax description: No optional parameter

Usage: Type command name and parameters following P:\> . Be used as the keyword to supply keyword and parameters of the relevant commands.

Relevant usage: None

Detailed description:

? List help of all commands

For example:

| | |
|---------|-------------------------------|
| P:\>? | |
| set | |
| get | list settings |
| store x | store current to xth settings |
| load x | load xth settings to current |
| exit | |
| write | save settings |

Command get

Syntax description: No optional parameter of keywords

Usage: Display basic parameters of the IP 300 IP phone

Relevant usage: None

Detailed description:

get Display basic running parameters of the IP 300 IP phone. Input ordinary password without debug being set as 0[disable], or input super password with debug set as 0[disable], then following parameters of IP phone

will be displayed:

IP 300 V1.38 settings

Password: *****

P:\>get

ip type 0[static]

| | | |
|---|----------------------------------|-------------------------------|
| ip 192.168.1.100 | subnetmask 255.255.255.0 | router 192.168.1.254 |
| dns 202.106.196.152 | dns2 202.106.196.115 | mac 00-09-45-65-a3-e6 |
| protocol 0[h323] | service 1[enable] | |
| servicetype 0[common] | serviceaddr 218.189.135.2 | serviceid [empty] |
| natraversal2[citron] | nataddwww.Showmyip.com | natttl 60 |
| phonenummer 6022 | account hk016 | pin [empty] |
| registerport 1719 | signalport 3102 | controlport 3022 |
| registerttl 60 | rtptos 0 | rtpport 3208 |
| jittersize 0 | | |
| calltype 0[normal] | localtype 1[account] | dtmf 0[control string] |
| dialplan 0[disable] | | |
| innerline 0[disable] | | |
| answer 30 | ringtype 12[user define] | digitmap 0[disable] |
| fwdpoweroff 0[disable] | | |
| fwdalways 0[disable] | fwdbusy 0[disable] | fwdnoanswer 0[disable] |
| callwaiting 0[disable] | | |
| audiotype 0[g7231] | audioframes 1 | 6.3k 1[enable] |
| vad 1[enable] | agc 0[disable] | aec 1[enable] |
| handsetin 9 | handsetout 21 | speakerout 21 |
| password 1234 | superpassword 12345678 | debug 1[output] |
| upgradeaddr [empty] | | |
| sntpip 0.0.0.0 | daylight 0[disable] | |
| timezone 55[(GMT+08:00)Beijing,Hong Kong,Urumqi] | | |

Input ordinary password with debug set as 0[disable], following information will be seen:

IP300 V1.38 settings


Password:****

P:\>get

ip type 0[static]

| | | |
|------------------------------|---------------------------------|-----------------------------|
| ip 192.168.1.100 | subnetmask 255.255.255.0 | router 192.168.1.254 |
| dns 202.106.196.152 | dns2 202.106.196.115 | |
| natraversal 2[citron] | rtpport 3208 | |

```
registerport 1719      signalport 3102      controlport 3022
account hk016
phonenumber 6022      fwdpoweroff 0[disable]
fwdalways 0[disable]  fwdbusy 0[disable]   fwdnoanswer 0[disable]
ringtype 12[user define]  answer 30
password 1234
upgradeaddr [empty]
snthip 210.59.157.10  daylight 0[disable]
timezone 55[(GMT+08:00)Beijing,Hong Kong,Urumqi]
P:\>
```

 **Note** The “V1.38” is the version number of the firmware for IP300, it could be different from the firmware version displaying on your phone. It is subject to renewal from time to time. For the latest version, please consult your service provider.

Command set

Syntax description: set keywords value

Usage: Used to configure password and other running parameters of IP300 IP phone.

Detailed description:

set iptype X

Set how IP phone gets relevant network parameters. X ranged from 0 through 3: 0: authorize users set IP address, subnet mask and router IP address of IP phone manually; 1: use DHCP mode. With this system, your LAN or router automatically assigns all the required network parameters to any device connected to it when the device log on. IP-300 IP phone is shipped from the factory with DHCP on. So, if your LAN or

router is configured to use DHCP addressing, the IP phone's LAN parameters will automatically be configured as soon as it is connected to the LAN or router and powered up; 2: use PPPoE mode. Those ADSL and Cable Modem users please select this item for it is a protocol especially designed for them. With this system, ADSL ISP automatically assigns all the required IP parameters to any device connected to it when the device log on; 3: use modem mode. Those who use IP phone with modem, please set the value as 3.

set pppid XXX

With **iptype** set as **2**, use this command to set ADSL ID; with **iptype** set as **3**, use this command to set Modem ID.

set ppppin XXX

With **iptype** set as **2**, use this command to set ADSL pin; with **iptype** set as **3**, use this command to set Modem pin.

set ip XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP address of IP-300 IP phone.

set subnetmask XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set subnet mask of IP-300 IP phone.

set router XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set router IP of network with

IP-300 IP phone.

set dns XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP address of DNS server.

set dns2 XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP of backup DNS server.

set mac XX-XX-XX-XX-XX-XX

Set MAC address of the IP-300 IP phone. Parameter xx-xx-xx-xx-xx-xx

must be an HEX number.

set protocol X

Set protocol of the IP-300 IP phone. Parameter X ranged from 0 through

5: 0 – H323 protocol; 1 -- Sip protocol; 2 -- Mgcp protocol; 3- Net2phone private service,4-iax 5-wp.

set service X

According to different protocol, set use protocol service or not. X ranged from 0 through 1. 0: do not use service; 1: use service.

set service type X

Enable/disable the repaid and service system .choose the repaid server provider. Parameter x ranged from 0 through 29: 0: disable repaid card;

1: use Mediarling service; 2: use eTalk card; 3: use Auvtech system; 4: use UTstarcom service; 5: use Ringtec service; 6: use Smartcon service;

7: use dda service; 8: use vida service; 9: use citron system; 10: use asiasoft system; 11: use uptech system; 12: use zte system; 13: use

huawei system; 14: use kaiman system; 15: use Ngstel system; 16: use asiainfo system; 17: use Lucent system; 18: use Harbour system 19: use IPN system; 20: use Yayng system 21: use Thinker system; 22: use Suntek system; 23: use Sippone system; 24 use Ipphonex system; 25 use FED (freeworlddialup) system; 26 use Net2phone system; 27: use stanaphone system; 28: use Txtc system; 29: use Italkbb system.

set nataddr XXXXX

According to system, set IP address of proxy. With SIP protocol used and **proxy** stun used, set stun server IP address.

set serviceid XXXXX

Set service ID according to required by service system.

set nattraversal X

Set use proxy or not. X ranged from 0 through 29: 0: do not use proxy.


When the log in server and IP phone in the same LAN, or the log in system supports the IP phone working behind the LAN; 1: Use proxy.

When the login system does not support IP phone working behind the LAN, please use this value to search public IP address of the NAT device. With this item selected, please make port mapping on NAT device; 2: With Citron private protocol used, use this value to fit into the GnuGK system transferring the voice and signal by router; 3: use this value with Auvtech private system used; 4: stun. Use this value with SIP

protocol used according to requirement of system; 5: use this value with
vida private system used; 6: aivgr use this value with aivgr private
system used.

set serviceaddr XXXX

According to protocol used, set IP address or domain name of log in server. With H323 protocol used, set IP address or domain name of gatekeeper; With MGCP protocol used, set IP address or domain name of Call Agent; With SIP protocol used, set IP address or domain name of SIP Proxy Server; With Net2phone protocol used, set IP address or domain name of designated server.

 **Note** With **H323** protocol used, if value of **set service** is **0**, then **set serviceaddr** command can be used to set IP address of gateway.

set serviceid XXXXX

Set service ID according to required by service system.

set nattraversal X

Set use proxy or not. X ranged from 0 through 6: 0: do not use proxy.

When the log in server and IP phone in the same LAN, or the log in system supports the IP phone working behind the LAN; 1: Use proxy.

When the login system does not support IP phone working behind the LAN, please use this value to search public IP address of the NAT device. With this item selected, please make port mapping on NAT device; 2: With Citron private protocol used, use this value to fit into the GnuGK system transferring the voice and signal by router; 3: use this

value with INNOPATH private system used; 4: stun. Use this value with SIP protocol used according to requirement of system; 5: use this value with vida private system used; 6: aivgr use this value with aivgr private system used; 7 Eproxy: use Eproxy system.

set nataddr XXXXX

According to system, set IP address of proxy. With SIP protocol used and **proxy** stun used, set stun server IP address.

Set nat ttl XX

When IP phone sit behind a NAT device, it will send packets to server every “**nat ttl**” seconds to keep the port mapping on the NAT device alive. “**nat ttl**” is an integer between 10 and 60, default value is 20.

set phonenumber XXXXXXXX

Set a number of IP-300 IP phone according to systems. Value xxxxx must be an Arabic numeral and no longer than 16 characters.

set account XXXXXX

With H323 protocol used, while calling card is set, set account of chosen card; while **local type** is set as 2[H235 account] , set ID; while **set localtype** is set as 1, set H323 ID. With MGCP protocol used, please set local name by this command. With Net2phone system used, set account of Net2phone card by this command.

set pin XXXXXXXXXX

With H323 protocol used, while calling card is set, set password of chosen

card; while **local type** is set as 2[H2355 account], set password. With MGCP protocol used, please set domain name by this command. With Net2phone system used, set password of Net2phone card by this command.

set registerport XXXX

Set register port. According to used protocol, set as follows: With H323 protocol used, XXXX is ranged from 1024 through 6553; With MGCP protocol used, please set is as 2427; With SIP protocol used, please set it as 5060; With Net2phone protocol used, this port could be any number.

set signalport XXXX

With H323 protocol used, signal port is Q.931 port using TCP protocol.

XXXX is arranged from 1024 through 65535.

With SIP protocol used and **proxy** is stun, signal port is stun port by stun Server specify or enter stun default port number 3478.

set controlport XXXX

Set control port. With H323 protocol used, this port is H.245 port using TCP protocol. XXXX is ranged from 1024 through 65535.

register ttl :X

With H323 or SIP protocol, IP phone will send a keep-alive registration message to H323 gatekeeper or SIP proxy server every "**register ttl**" seconds. The minimum value is 10, maximum value is 255. Default is 60.

set rtptos X

Set TOS segment of IP head package in RTP digital follow.

set rtpport XXXX

RTP port is the port transferring and receiving voice flow using UDP protocol. XXXX is ranged from 1024 through 65535.

Jitter size:X

Setting RTP data stream anti-buffer size. The specific value ranges 0-32. The unit is Tone Frame number. (The value is bigger, the tone frame number is much more in the buffer area and the time-lapse is longer all ordingly.)

set calltype X

Set call type of the phone. X is ranged from 0 through 2: 0: call out in normal way; 1: call out in faststart way; 2: call out in faststart and tunneling way. It is a recommended way with H323 protocol used.

set localtype X

With H323 protocol used, this command used to set how IP phone log in gatekeeper. X is ranged from 0 through 2: 0: use phone number as E.164 and H323 ID to login the GK; 1: use phone number as E.164 and designated H323 ID by set **account XXX** command; 2: H235 account, with encryption being supported by GK, set value as 2.

set dtmf X

Set DTMF relay type. X is ranged form 0 through 3: 0:control string ; 1:inband audio ; 2: signal keypad ; 3:rfc 2833.

set dialplan X

Enable/disable dial plan and dial number. Parameter X ranged from 0

through 3: 0: disable dial plan; 1: enable dial plan; 2: use dial number; 3: use 179XX service.;4: use hotline function.

set dialnumber XX

When **set dialplan** value set as 2, please use this command to set **dial number**. For example, with eTalk card used, please set it as 00. When **set dialplan** value set as 4, please use this command to set **hotline number**.

set dddcode XX

Set the area code when set **dialplan** value set as **1** or **2**. For example, the area code of Beijing is 10; the area code of Shanghai is 21, and the area code of Chengdu is 28, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set iddcodes XXX

Set the country code when set **dialplan** value set as **1** or **2**. For example, the country code of China is 86; the country code of USA is 1, etc. Parameter xxxx must be an Arabic numeral and no longer than 4 characters.

set iddprefix XX

Set IDD service prefix number when set **dialplan** value set as **1** or **2**. For example, IDD service prefix number of china is 00; IDD service prefix number of USA is 1, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set dddprefix XX

Set DDD service prefix number when set **dialplan** value set as **1** or **2**.

For example, DDD service prefix number of china is 0; DDD service prefix number of USA is 1, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set innerline X

Set use multi-settings or not. X ranged from 0 through 2: 0: disable multi-settings; 1: designated system to place calls; 3: enable multi-settings.

set localpreifx X

With **innerline** set as **1[enable]** or **2 [switch]**, please set the number switching to backup setting 1 here, such as 56.

set nonlocalprefix X

With **innerline** set as **1[enable]** or **2 [switch]**, please set the number switching to backup setting 2 here, such as 57.

set answer X

Set the ring seconds before the phone answers the call auto or forward the calls. X is ranged from 0 through 60.

set ringtype X

Set types of ring. X is ranged from 0 to 12: 0-9: ring as ordinary rings in different frequency; 10: do not ring; 11: ring as music shipped from factory; 12: ring as music saved by user.

set digitmap X

Set whether to use digitmap. X ranged from 0 to 1: 0: do not use digitmap; 1: use digitmap.

set fwdnumber XXXXXXX

Set receiving forwarded calls phone number. XXXX must be an Arabic numeral and no longer than 16 characters

set fwdpoweroff X

Enable/disable forward calls if power off. X is ranged from 0 through 1. 0: do not forward calls if power off; 1: forward call if power off.

set fwdalways X

Enable/disable forward all calls. X is ranged from 0 through 1. 0: do not forward all calls; 1: forward all calls.

set fwdbusy X

Enable/disable forward calls if busy. X is ranged from 0 through 1. 0: do not forward calls if busy; 1: forward call if busy.

set fwdnoanswer X

Enable/disable forward calls without replying. X is ranged from 0 through 1. 0: do not forward calls without replying; 1: forward call without replying.

set audiotype X

Set audio type. X is ranged from 0 through 5: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: auto.

set audioframes X

Set audio frames in RTP package. X is Arabic numerals between 0 and 7.

set 6.3k X

With G.7231, set IP-300 IP phone to use 6.3K rate or not. X is ranged from 0 through 1: 0: use 6.3K rate; 1: use 5.3K rate.

set vad X

Enable/disable VAD. X is ranged from 0 through 1: 0: disable VAD; 1: enable VAD.

set agc X

Enable/disable AGC. X is ranged from 0 through 1: 0: disable AGC; 1: enable AGC.

set aec X

Enable/disable AEC. X is ranged from 0 through 1: 0: disable AEC; 1: disable AEC.

set handsetin X

Set initial volume of handset. X is ranged from 0 through 15.

set speakerin X

Set initial volume of microphone of the base. X is ranged from 0 through 15.

set handsetout X

Set initial volume of handout. X is ranged from 0 through 31.

set password XXXX

Set password of the IP-300 IP phone. XXX must be ASCII characters and no longer than 7 characters.

set debug X

Set open debugging message output grade for special tool. X is ranged from 0 through 5: 0: close debugging output; 1: output the operation information to the window; 2: output all the bug information and data in test window; 3: save the bug information into SDRAM; 4: disable checks the mark.

set upgradeaddr XXX.XXX.XXX.XXX

Set IP address or domain name of FTP server supplying upgraded program of IP-300 IP phone.

set ntsip XXX.XXX.XXX.XXX

Set IP address of time server.

set daylight X

Set use daylight or not. X ranged from 0 through 1: 0: do not use daylight; 1: use daylight.

set timezone XX

Set time zone.

Command store

Syntax description: no keyword. Parameter ranged from 0 through 4.

Usage: Save the current settings to the designated position.

Relevant Usage: store 1

Command load

Syntax description: no keyword. Parameter ranged from 0 through 4.

Usage: Load the designated settings to the current position.

Relevant Usage: load 1

Command exit

Syntax description: no keyword and parameter

Usage: Exit from Telnet command window without saving the configuration.

Relevant usage: None

Command write

Syntax description: No keyword and parameter

Usage: Save the configuration and restart the IP-300 IP phone.

Command ping

Syntax description: ping IP address

Usage: ping IP address of other NAT device


Relevant usage: In telnet window, input ping xx.xxx.xx.xx (an IP address)

and return, then the result will be displayed. If the address is effective, “ping

OK” will be seen; if the address is ineffective, nothing will be seen. Fox

example:

```
P:\>ping 203.93.9.57
P:\>
ping OK
P:\>ping 27.56.120.56
P:\>
```

 **Note** Usually, the echo time of ping command is no more than 1 second. So if the result is not displayed in 5 seconds, ping command is fail.

ftp command

Syntax description: ftp value

Usage: the system connects to the FTP server auto to get the corresponding file and deal with it.


Relevant usage: ftp X


X ranged from 0 through 2:

X-0: Connect to FTP Server to get the file of updating program and save it to the SDRAM of the phone. Then the file can be read by PalmTool. This operation aims at testing.

X-1: Connect to FTP Server to get the file of updating program and update program Flash. This operation aims at updating program.

X-2: Connect to FTP Server to get the file of updating dial rules and update program Flash. This operation aims at updating dial rule.


 **Note** When you use ftp 0 and ftp 1 commands, if the file get from FTP server is too large or the net speed is too slow, then the process will not be seen in telnet window. Please be patient. Using ftp command in telnet to get file spends almost same minutes as getting file using phone. So if nothing is displayed after too long time, it means that ftp is fail.




 **Note** All the Telnet commands of IP-300 IP phone should be written in low case and the password is case sensitive.

4 USING THE IP PHONE

1.To place a call

Call another IP 300 IP phone under the same Gatekeeper:

1. Handset: Pick up the handset and listen for the Internet dial tone. Then dial the phone number you wish to call and press . Once the call connection has been established and the ring tone has sounded, wait for the other party to answer. When the other party answers, you can begin speaking. When the call is over, put back the handset. The dialed number will be saved into the buffer.

2. Hand free: Press  and listen for the Internet dial tone. Then input the phone number you wish to call and press . Once the call connection has been established and the ring tone has sounded, wait for the other party to answer. When the other party answers, you can begin speaking. When the call is over, Press  again. The dialed number will be saved into the buffer.

When you're using gatekeeper provided by the manufacturer to call a fixed line or mobile

1. Lift the handset from the cradle or press "SPK" and listen for the dial tone **Note:** Upon lifting the handset, the LCD displays the message **Please call...**
2. Dial "00" (*or any prefix provided by service provider*) followed by the destination phone number and press the # key. When dialing a number in North America, always dial 00 + 1 + the area code + the number.

As the IP Phone attempts to connect the call, the LCD displays the message **Calling...** as well as the phone number dialed.

If the connection attempt is successful, the **Calling** message will change to **Connected**.

After displaying the **Connected** message, the phone being called will begin to ring. When the call is answered, you may start talking.

2. Receiving a Call

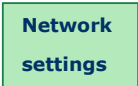
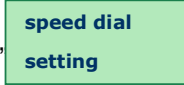
IP300 receives incoming calls from other IP Phones using the same service platform.

The IP Phone works just like an ordinary phone for incoming calls. When it rings, just lift the handset and begin speaking.

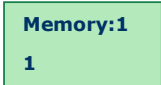

3. Speed Dialing

This feature stores up to ten phone numbers in the IP Phone's memory locations and retrieves them for Memory Dialing.

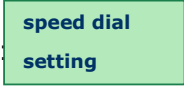
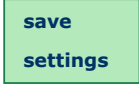
Storing a Number into Memory Dial:


1. In the setting mode,  press the “VOL+” button four times  to browse the different settings until reaching “speed dial settings”

Press “SPK” button.

2. When you see this screen:  press “Local IP” button to enter a word (e.g. a name) to denote this memory. Then, press “SPK” button to input enter this screen: 

3. Again, press “Local IP” button to input the phone number.
4. Press “SPK” button to confirm and input the next number.
5. When having finished the input, press “Redial” button to return to the

speed dial setting screen:  press “Redial” six times until into save settings screen. 

6. Press “SPK” button to input enter this screen 
7. Press “SPK” to reboot the IP phone back to “ready for call” status.

Dial a Stored Number:

1. Lift the handset or press the **SPK** button to hear the dial tone.
2. Press the **M1-M0** buttons on the right of the keypad, followed by the “Speed Dial” button. The selected number will be dialed.

Appendix Table : IP-300 IP phone digital-character key map:

| Keys | Press Once | Press Twice | Press Thrice | Press quartic | Press quintic |
|-------------|-----------------------|--------------------|-------------------------|--------------------------|--------------------------|
| 1 | 1 | . | , | ?/_ | !// |
| 2 | 2 | A/a | B/b | C/c | [|
| 3 | 3 | D/d | E/e | F/f |] |
| 4 | 4 | G/g | H/h | I/i | * |
| 5 | 5 | J/j | K/k | L/l | |
| 6 | 6 | M/m | N/n | O/o | # |
| 7 | 7 | P/p | Q/q | R/r | S/s |
| 8 | 8 | T/t | U/u | V/v | |
| 9 | 9 | W/w | X/x | Y/y | Z/z |
| * | . | | | | |
| 0 | 0 | space | :/@ | ;/- | \/& |
| # | Case change | | | | |

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